

IN THE SPECIFICATION:

Please amend the specification as follows:

Paragraph beginning on page 1, at prenumbered line 5, has been amended as follows:

The present invention is related to a ~~modeling~~ molding process for sink compound laminate, and more particularly, to one that achieves integrated heterogeneous alloy of copper and aluminum by ~~diffused lamination~~ diffusion bonding to the interface between both metal materials into a given profile for taking advantage of highly efficient heat conduction property of the copper section to conduct at the first time the heat from the heat source to the entire aluminum section that covers up the copper section to dissipate the heat by the profile of the aluminum section.

Paragraph beginning on page 1, at prenumbered line 24, has been amended as follows:

In an earlier improvement made by this author, a casting process involving heterogeneous metals was used for the manufacturing of copper and aluminum integrated sink base sheet to take advantage of the high heat conduction property of the copper sheet to ~~fast~~ rapidly conduct the heat from the heat source to the entire sink to dissipate the heat by the sink profile of the aluminum alloy provide on the top of the copper sheet for significantly upgrading the sink efficiency while providing at the same time the high efficiency of heat conduction by copper and the lightweight feature of the aluminum alloy.

Paragraph beginning on page 2, at prenumbered line 10, has been amended as follows:

The primary purpose of the present invention is to provide a sink compound laminate molding process. Wherein, a gravity casting process is used to directly pour the ~~melting~~ molten aluminum into the surface of copper, which has been already heated up to 300-650°C. Activities of the copper and aluminum are high enough to easily produce chemical binding reaction as chemical compounds ~~in~~ with

a branch structure can be leached from copper to react with aluminum and the branch structure of the chemical compound covers up the ~~peripheral~~ periphery of the crystals of aluminum resulting in ~~diffused-binding~~ diffusion bonding to significantly improve the binding force between copper and aluminum.

Paragraph beginning on page 3, at prenumbered line 5, has been amended as follows:

The present invention is related to a sink compound laminate molding process. Referring to Fig. 1, a compound laminate (1) is provided with a net profile defined by an aluminum material (12) with a copper material (11) bound to the bottom of the net profile of the aluminum material (12) so that when the sink molded from the compound laminate (1) contacts a heat source with the copper material (11), the high heat conduction property of the copper material (11) ~~fast~~ rapidly conducts the heat to the aluminum material (12) covering up the copper material (11) for the profile of the aluminum material (12) on top of the copper material (11) to dissipate the heat.

Paragraph beginning on page 3, at prenumbered line 16, has been amended as follows:

Now referring to Fig. 2 for the molding process of the present invention, wherein, the process includes the following steps:

Step 1: Prepare sheet copper material in a thickness of 0.1-0.8 mm depending on the profile of the sink; sink, the copper sheet material may have a various shape including a triangle or a strip;

Step 2: Place the copper material in the molding cavity to such extent that the bottom of the copper material completely bound to the bottom layer of the molding cavity;

Step 3: The copper material is heated up to 360-650°C and an inert gas is injected into the molding cavity or the molding cavity is maintained in vacuumed status to prevent oxidization taking place on the surface of the copper materials; and

Step 4: The ~~melting~~ molten aluminum material is poured into the molding cavity using a gravity casting process to create a ~~diffused-binding~~ diffusion bonding to the interface between both of the copper and aluminum materials.

Paragraph beginning on page 4, at prenumbered line 2, has been amended as follows:

Finally, the aluminum material is cooled down and cured to avail a structure of a compound laminate of an integrated heterogeneous alloy of copper and aluminum in a given profile. Wherein, the distribution of crystals on the copper/aluminum interface as illustrated in Fig. 3, the segment marked with Area ~~One~~ 1 (A1) relates to the area of copper materials, Area ~~2;~~ 2 (A2) relates to the aluminum area; and Area ~~3;~~ 3 (A3) relates to the leached copper product indicating that certain part of copper will be leached out in the interface between the copper and aluminum materials during the gravity casting process for the aluminum material to tightly bind to the aluminum material. As illustrated in Fig. 4, the segment marked with ~~Area-1)~~ Area 1 (A1) relates to aluminum crystals; and ~~Area-2;~~ Area 2 (A2) leached copper produce indicating that the leached copper is permeable along the interface of the aluminum crystals and further surrounding around the aluminum crystals to form a chemical compound in with a branch structure. Aluminum crystals are enclosed in the chemical compound in the branch structure to produce ~~diffused binding;~~ diffusion bonding, and thus the significantly improved binding force between the copper and the aluminum materials.

Paragraph beginning on page 4, at prenumbered line 21, has been amended as follows:

Strict copper or copper alloy, and strict aluminum or any aluminum alloy selected form a group comprised of AlSiCu, AlSiZn, AlSiMg, AlSiCuMg, AlGe, AlGeSi, AlCu, AlMn, AlMg, AlLi, AlSn and AlPb respectively for the copper and aluminum materials in the present invention. Table 1 lists physical properties of copper and aluminum that may serve for the ~~diffused-binding;~~ diffusion bonding. In general, the copper is heated to 500-1100°C to be pre-oxidized into melting status to proceed binding with the ~~melting~~ molten aluminum. Before the operation, it

should be confirmed that the oxygen differential pressure and the binding temperature are respectively at their critical points, and that the binding temperature is at the eutectic temperature instead of the melting point of copper at 1083°C.

Paragraph beginning on page 5, at prenumbered line 4, has been amended as follows:

The present invention adopts the gravity casting process to directly pour the ~~melting~~ molten aluminum material into the surface of the copper material preheated to 300-650°C. Both of the copper and the aluminum materials are at their high activities to generate chemical reaction for the copper materials to be leached out to react with the aluminum material and to produce a chemical compound in branch structure; in turn, aluminum crystals are enclosed by the chemical compound in branch structure to yield ~~diffused binding~~, diffusion bonding, and thus to significantly improve the binding force between the copper and the aluminum materials. As a result, the finished product of the sink provides excellent heat dissipation performance while the process features low production cost and easy process to be comprehensively applied in the production of various types of sink. Therefore, this application is duly filed accordingly.